IN THE CLAIMS:

1. (Original) A test method for testing the thermal mechanical fatigue performance of a test material, the test method comprising the steps of:

preparing a test specimen of the test material, wherein the test specimen comprises

a base, and

a rib extending outwardly from the base;

thermally cycling the test specimen through at least one test cycle, wherein in each test cycle the rib is heated to a higher rib temperature and thereafter cooled to a lower rib temperature; and

evaluating the test specimen for thermal mechanical fatigue damage.

2. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen of a nickel-base superalloy test material.

3. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen with two ribs extending outwardly from the base.

4. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen with at least one slot in the rib, wherein each slot extends parallel to a lengthwise direction of the rib.

5. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen with exactly one slot in the rib extending parallel to a lengthwise direction of the rib, so that the rib is supported from the base at a first end of the rib and at a second end of the rib, but does not contact the base in a central portion of the rib.

6. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen with more than one slot in the rib, wherein each slot extends parallel to a lengthwise direction of the rib.

7. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen having a strip material joined to a remainder of the rib and extending parallel to a lengthwise direction of the rib, wherein the strip material is different from a rib material that forms a remainder of the rib.

8. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen having a mass of the base at least 25 times larger than a mass of the rib.

9. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen having a width of the base at least 5 times larger than a width of the rib.

10. (Original) The test method of claim 1, wherein the step of preparing includes the step of

preparing the test specimen having a height of the base at least 3 times larger than a height of the rib.

11. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

maintaining the rib in compression while the rib is at the higher rib temperature.

12. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

maintaining the base at a lower temperature than the rib when the rib is heated toward the higher rib temperature.

13. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

thermally cycling the test specimen in a plurality of test cycles.

14. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

thermally cycling the test specimen by general heating.

15. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

thermally cycling the test specimen by local heating of the rib.

16. (Original) The test method of claim 1, wherein the step of thermally cycling includes the step of

heating the rib to the higher rib temperature, holding the rib at the higher rib temperature for a period of time, and thereafter cooling the rib to a lower rib temperature.

17. (Original) The test method of claim 1, including an additional step, prior to the step of thermally cycling, of

insulating at least a portion of the base.

18. (Original) The test method of claim 1, wherein the step of evaluating includes the step of

evaluating the test specimen optically for a presence of fatigue cracks in the rib.

19. (Original) A test method for testing the thermal mechanical fatigue performance of a test material, the test method comprising the steps of:

preparing a test specimen of the test material, wherein the test specimen comprises

a base, and

a rib extending outwardly from the base, wherein the rib includes a slot therein, so that the rib is supported from the base at a first end of the rib and at a second end of the rib, but does not contact the base in a central portion of the rib;

thermally cycling the test specimen in at least one test cycle, wherein in each test cycle the rib is heated to a higher rib temperature and thereafter cooled to a lower rib temperature, and wherein the rib is maintained in compression while the rib is heated toward the higher rib temperature; and

evaluating the test specimen for thermal mechanical fatigue damage.

20. (Original) The test method of claim 19, wherein the step of preparing includes the step of

preparing the test specimen of a nickel-base superalloy test material.

21. (Original) The test method of claim 19, wherein the step of preparing includes the step of

preparing the test specimen having a mass of the base at least 25 times larger than a mass of the rib.

22. (Original) The test method of claim 19, including an additional step, prior to the step of thermally cycling, of

insulating at least a portion of the base.

23. (Original) The test method of claim 19, wherein the step of thermally cycling includes the step of

maintaining the base at a lower temperature than the rib when the rib is at the higher rib temperature.

24. (Original) The test method of claim 19, wherein the step of thermally cycling includes the step of

thermally cycling the test specimen in a plurality of test cycles.

25. (New) The test method of claim 1, wherein the step of thermally cycling includes the step of

thermally cycling without the use of force-applying machinery.